for a single observation in R. A. and Dec., are about $0^s.020$ and $0''.25$ respectively. These figures also show that the REPSOLD meridian circle is capable of first-class work, and that the refraction as given in Vol. 1, *Publications Lick Observatory*, is not very far out of the way. J. M. S.

NEW DOUBLE STARS.

I have found the stars, 2 *Piscium* and W XXIII.803 to be double with the twelve-inch equatorial. Mr. BURNHAM has kindly measured these stars with the thirty-six-inch and supplied me with his results for publication. From the inequality of the components, 2 *Piscium* is a difficult object with the twelve-inch.

Following are Mr. BURNHAM'S measures. E. E. B.

1889, August 5.

2 Piscium.

22h. 53m. 18s.
0° 19′ ″

	°	″		
1889.553	96.0	3.87	6	14
.556	91.8	3.88	6	13.5
.589	93.1	3.68	6	13.5
1889.57	93.6	3.81	6	13.7

W XXIII.803.

23h. 40m. 53s.
4° 35′ ″

	°	″		
1889.553	166.2	0.49	8.7	8.7
.556	166.5	0.59	8.6	8.6
.589	166.0	0.53	8.5	8.5
1889.57	166.2	0.54	8.6	8.6

LIST OF THE ARTICLES, ETC., CONTRIBUTED TO SCIENTIFIC AND OTHER JOURNALS BY THE ASTRONOMERS OF THE LICK OBSERVATORY SINCE JUNE 1, 1888.

[COMPILED BY MR. C. B. HILL.]

Writings of Edward S. Holden.

Hand-Book of the Lick Observatory. San Francisco, June, 1888. 32°, pp. 135.

Stellar Photography.—*Overland Monthly*, June, 1888.

Note on Earthquake Intensity in San Francisco, 1808-1888.—*American Journal of Science*, June, 1888.

The Total Solar Eclipse of 1889, January 1st, in California.—*Monthly Notices Royal Astronomical Society*, vol. 48.

Occultation of 47 Libræ by Jupiter, June 9, 1888.—*Astronomical Journal*, vol. 8, p. 64.

The Ring Nebula in Lyra.—*Monthly Notices Royal Astronomical Society*, vol. 48, p. 383.

Regarding Sir W. Herschel's observations of Volcanoes in the Moon. *The Observatory*, 1888, p. 334.

Earthquakes in California, Washington and Oregon, 1769-1888. Communicated to the *California Academy of Sciences* in July, 1888.

Sidereal Astronomy, Old and New. 2 papers.—*The Century* for August and September, 1888.

Occultation of a Star (11th magnitude) by Mars.—*Astronomical Journal*, vol. 8, p. 102.

Observations of the Lunar Eclipse of July 22, 1888, at the Lick Observatory of the University of California. Communicated to the *National Academy of Sciences*. [By all the astronomers].

Suggestions for Observing the Total Eclipse of the Sun on January 1, 1889. (Printed by Authority of the Regents of the University of California). State Printing Office, Sacramento, 1888. 8vo, pamphlet.

Hypothetical Parallax of Binary Pairs.—*Sidereal Messenger*, October, 1888, p. 356.

Physical Observations of Mars during the Opposition of 1888, at the Lick Observatory. (With a plate).—*Astronomical Journal*, vol. 8, p. 97.

The Same.—*Journal of Liverpool Astronomical Society*, vol. 7, November, 1888, p. 7, with plates.

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Earthquakes in California (1888).—*American Journal of Science*, May, 1889, p. 392.

On the Solar Eclipse of January 1, 1889.—*Observatory*, March, 1889, page 130; May, p, 221.

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Great Telescopes and their Work.—*Observatory*, March, 1889, p. 138.

Recent Discoveries in the Nebulæ by means of Photography.—*Scientific American*, July 27, 1889.

On the Helical Nebulæ.—*Publications Astronomical Society of the Pacific*, No. 3, July 27, 1889. Die Helikalischen Nebel.—*Himmel und Erde.*

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Writings of C. B. Hill.

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